





 $\lfloor \omega_z \rfloor_{ib} \quad \lfloor \omega_z \rfloor_{ib} \quad \text{Provide Roll Rate Information}$

Accelerometers Do Not

[A Down Jib

& Pitch

Angular Rate Synthesize

AFoward A Right

Acceleration _

About ECEF Frame. Nav. Frame (ENU) Craft Rate is: Comments Precession Rate Sensitivity to Road Bumps. (Roll = 0)Reduce the Computation Apply Low Pass Filtering Compute new Craft Rate > 1=1+1.de Speed = Speed + A,di 10.0+0=0 C R+h V tan Ø R+h Compute New Heading $Head = Head + \omega_x dt$ Compute New Position $Pitch = Pitch + \omega, dt$ Compute new Speed 3 Hz. Compute New Pitch ⇒ 10 Hz. (Use ± 10° Limits) $\mathcal{D}_{i}^{"} = \mathcal{D}_{i}^{"}$ 100 a X φ = - P. £, s, e, Rev. B-4 9/8/98 John Begin Preliminary VEL INS Lon III Speed INS Dynamic Propagation Model Propagation Dynamic Model Forward Speed, Pitch & Pitch Rate. utilized with all Variables including Linear Acceleration $\mathcal{E}_{\dot{\vec{e}},\dot{\vec{e}}}$ Turn Rate, Forward Acceleration, Forward Direction Knowledge Based Limits may be Direction, Heading Information is contained within V_E and V_N only moves in the ± Forward and is propageted as velocity. Heading. Since the Vehicle Attitude does Not Include Notes